

IN THE CLAIMS:

Please cancel claims 1-19, 42, 48, 50-51, 57, 61, 65-67 and 69-72, and add new claims as follows. These cancellations along with the prior cancellations are reflected in the following listing of claims, along with amendments. This listing of claims replaces all previous such listings.

1-42. (Canceled)

43. (Currently Amended) An osteogenic sponge composition comprising:

A a highly mineralized sponge implant device, said device being three-dimensionally stable but flexible, said device consisting essentially of a resorbable sponge matrix formed of lyophilized collagen and having particulate biocompatible mineral embedded within said matrix, said device comprised 1% to 3% by weight of the lyophilized collagen and 97% to 99% by weight of the particulate biocompatible mineral; and
an osteogenic factor.

44. (Previously Amended) The device of claim 43 wherein the particulate biocompatible mineral comprises bone particles.

45. (Previously Amended) The device of claim 43 wherein the particulate biocompatible mineral includes a synthetic ceramic.

46. (Previously Amended) The device of claim 45 wherein the ceramic material includes a calcium phosphate ceramic.

47. (Previously Amended) The device of claim 46 wherein the calcium phosphate ceramic is biphasic calcium phosphate.

48. (Canceled)

49. (Currently Amended) An interbody spinal fusion device, comprising:

a load bearing member sized for insertion between adjacent vertebrae; and

a composition according to any of claims ~~1-19 and 42-48~~ 43-47 retained by said load bearing member.

50-51. (Canceled)

52. (Currently Amended) The osteogenic sponge composition of claim ~~51~~ 43 wherein the collagen comprises telopeptide collagen.

53. (Previously Added) The osteogenic sponge composition of claim 52, wherein the osteogenic factor comprises a bone morphogenic protein.

54. (Previously Added) The osteogenic sponge composition of claim 53, wherein the bone morphogenic protein comprises BMP-2 or BMP-7.

55. (Previously Added) The osteogenic sponge composition of claim 54, wherein the bone morphogenic protein comprises BMP-2.

56. (Previously Added) The osteogenic sponge composition of claim ~~54~~ 43, wherein the particulate biocompatible mineral has an average particle diameter of at least about 0.5 millimeters.

57. (Canceled)

58. (Currently Amended) The ~~device~~ osteogenic sponge composition of claim ~~57~~ 43, wherein the particulate biocompatible mineral has an average particle diameter in the range of about 0.5 millimeters to about 5 millimeters.

59. (Currently Amended) The ~~device~~ osteogenic sponge composition of claim 58, wherein the particulate biocompatible mineral has an average particle diameter of about 1 millimeter to about 3 millimeter.

60. (Currently Amended) A highly mineralized sponge implant device, said device being three-dimensionally stable but flexible, said device comprising a resorbable sponge matrix and a particulate biocompatible mineral embedded within said matrix, said device comprised 1% to 3% by weight of a material forming said sponge matrix, and 97% to 99% by weight of the particulate biocompatible mineral;

wherein said resorbable sponge matrix comprises collagen, and said particulate biocompatible mineral comprises biphasic calcium phosphate; and
an osteogenic factor.

61. (Canceled)

62. (Currently Amended) The device of claim ~~61~~ 60, wherein the osteogenic factor comprises a bone morphogenic protein.

63. (Previously Added) The device of claim 62, wherein the bone morphogenic protein comprises BMP-2 or BMP-7.

64. (Previously Added) The device of claim 63, wherein the bone morphogenic protein comprises BMP-2.

65-67. (Canceled)

68. (Currently Amended) The osteogenic sponge composition ~~highly mineralized sponge implant device~~ of claim 43, wherein said resorbable sponge matrix comprises fibrillar collagen.

69-72. (Canceled)

73. (New) An osteogenic sponge composition comprising:

a highly mineralized sponge implant device, said device being three-dimensionally stable but flexible, said device consisting essentially of a resorbable sponge matrix formed of collagen and having particulate biocompatible mineral embedded within said matrix, said

device comprised 1% to 3% by weight of the collagen and 97% to 99% by weight of the particulate biocompatible mineral, said device prepared by providing a slurry including the collagen and the particulate biocompatible mineral, freeze-drying the slurry to form a dried sponge material, and crosslinking the dried sponge material to result in a three-dimensionally stable but flexible device ; and

an osteogenic factor.

74. (New) An osteogenic composition, comprising:

a highly mineralized sponge implant device, said device being three-dimensionally stable but flexible, said device comprising a resorbable sponge matrix and a particulate biocompatible mineral embedded within said matrix, said device comprised 1% to 3% by weight of a material forming said sponge matrix, and 97% to 99% by weight of the particulate biocompatible mineral, wherein said resorbable sponge matrix comprises collagen, said particulate biocompatible mineral comprises biphasic calcium phosphate, and said resorbable sponge matrix has been prepared by a process comprising freeze-drying a slurry including the collagen and particulate biocompatible mineral; and

an osteogenic factor.